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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,187	02/17/2004	Andrew P. Nguyen	6601.P041	1768

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EXAMINER

TADESSE, YEWEBDAR T

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/781,187	NGUYEN, ANDREW P.	
	Examiner	Art Unit	
	Yewebdar T Tadesse	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12-17 and 21-32 is/are rejected.
- 7) ☒ Claim(s) 9-11, 18-20 and 33-37 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01/14/2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagamine (US 2002/0053319).

As to claim 1, Nagamine discloses (see Fig 6) a semiconductor substrate processing apparatus comprising a frame (15); a semiconductor substrate support (chuck 71) to support a semiconductor substrate (W), the semiconductor substrate having a central axis; a dispense head (90,91 and 100) connected to the frame to dispense a semiconductor processing fluid onto the semiconductor substrate; and a catch cup section attached to the frame having an inner surface and an outer surface (cup 70 having outside and inside surface, in the inside section items 75 and 84 included), at least a portion of the inner surface (see a portion of plate 84) not facing towards the central axis of the semiconductor substrate (W).

As to claim 2, a line normal to and extending away from the portion of the inner surface (a line normal to the inner surface of 84) does not intersect the central axis of the semiconductor substrate (see Fig 6).

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As to claim 3, in Nagamine (see Fig 6) a lip (84 or bent part of 75) of the catch cap 70 extends from the inner surface toward the central axis of the semiconductor substrate (W).

With respect to claims 4-7, the lip (84 or bent part of 75) comprise an upper surface and a lower surface and at least a portion of the upper surface or lower surface of the lip facing away from the central axis or a line normal to the upper or lower surface of the lip (84 or bent part of 75) does not intersect the central axis of the semiconductor substrate (see Fig 6).

As to claim 8, in Nagamine (see Fig 6) the catch cup (70) further comprises at least two drain openings (82) and a passageway (bottom portion 77) interconnecting the at least two drain openings (82).

As to claim 12, Nagamine discloses (see Fig 6) a semiconductor substrate processing apparatus comprising a frame (15); a semiconductor substrate support (chuck 71) to support a semiconductor substrate (W), the semiconductor substrate having a central axis; a dispense head (90,91 and 100) connected to the frame to dispense a semiconductor processing fluid onto the semiconductor substrate; and a catch cup section (sections of cup 70) attached to the frame around the semiconductor substrate support having an upper surface (the bent part of 75) facing towards the central axis of the semiconductor substrate.

As to claim 13, in Nagamine the substrate has a surface in a plane.

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With respect to claims 14-15, in Nagamine (see Fig 6) most of the catch cup (70) sections are provided below the plane and no portion of the upper surface (the bent part of the 75) of the catch cup is parallel to the plane.

As to claims 16-17, in Nagamine (see Fig 6) a peak formation extends from the upper surface (at the tip of the bent part of the 75), dividing the upper surface inner and outer portions, the inner portion of the upper surface facing toward the central axis of the substrate (W), and the outer portion of the upper surface facing away from the central axis of the substrate; or a line normal to and extending only away from the inner portion of the upper surface of the (bent part of 75) intersects the central axis of the semiconductor substrate and a line normal to and extending only away from the outer portion (of bent part 75) of the catch cap does not intersect the central axis of the substrate.

As to claim 21, Nagamine discloses (see Fig 6) a semiconductor substrate processing apparatus comprising a frame (15); a semiconductor substrate support (chuck 71) to support a semiconductor substrate (W), the semiconductor substrate having a central axis; a dispense head (90,91 and 100) connected to the frame to dispense a semiconductor processing fluid onto the semiconductor substrate; and a catch cup having a mid-section and a top-section (sections of 70), the mid section attached to the frame around the semiconductor substrate support (see item 75 on the right side attached to the frame close to the substrate) having an upper surface (the bent part of 75) facing towards the central axis of the semiconductor substrate, the top section attached to the frame (the top area where item 84 is attached to the frame

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through supporting member 106 around the mid-section) and having an inner surface (inside and outside surfaces of item 84), at least a portion of the inner surface of item 84 facing away from the central axis of the substrate.

As to claim 22, in Nagamine the substrate has a surface in a plane.

With respect to claim 23, in Nagamine (see Fig 6) no portion of the upper surface (the bent part of the 75) of the catch cup is parallel to the plane.

As to claim 24, a line normal to and extending only away from the inner surface of the top section (of item 84) of the catch cap does not intersect the central axis of the substrate (see Fig 6).

As to claims 25, in Nagamine (see Fig 6) the top section of the catch cup (item 84) comprises a lip (tip of 84) extends from the inner surface, dividing the upper surface inner and outer portions.

As to claim 26, in Nagamine (see Fig 6) a peak formation extends from the upper surface (at the tip of the bent part of the 75), dividing the upper surface inner and outer portions.

With respect to claims 27-29, the lip of the top section (tip of 84) comprise an upper surface and the inner portion of the top surface of the mid section (item 75) facing towards the central axis of the substrate (W), and the outer portion of the upper surface facing away from the central axis of the substrate; or a line normal to and extending only away from the upper surface of the lip (tip 84) do not intersect the central axis of the semiconductor substrate (see Fig 6).

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As to claim 30, a line normal to and extending only away from the inner portion of the top surface of the mid-section of the catch cup (of bent part 75) intersect the central axis of the substrate and a line normal to and extending only away from the outer portion of the top surface of the mid-section (of bent part 75) of the catch cap does not intersect the central axis of the substrate (see Fig 6).

With respect to claims 31-32, at least a portion of the lower surface of the lip (tip 84) of the top section of the catch cup faces away from the central axis of the substrate and a line normal to and extending only away from the lower surface of the lip (tip 84) of the top section of the catch cup does not intersect the central axis of the substrate (see Fig 6).

Allowable Subject Matter

3. Claims 9-11, 18-20 and 33-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: as to claims 9-11, prior art of record does not disclose or suggest a semiconductor processing apparatus comprising, among others, a drain opening on the inner surface of the catch cup above the lip. With respect to claims 18-20 and 33-37, prior art of record does not disclose or suggest a semiconductor processing apparatus comprising, among others, a peak of the peak formation of the upper surface of the catch cup, is below the outer edge of the semiconductor substrate.


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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM-4: 30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


YTT


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